

# Medical Practice

## Malpractice Litigation as a Factor in Choosing a Medical Specialty

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*Although many factors have been identified as influencing specialty choice, there has been no research focusing on the effects of the current climate of medical practice, including litigation. Our study examines medical students' and residents' awareness of the malpractice litigation environment and their reasons for choosing a specialty that is at either high or low risk for malpractice suits. Longitudinal data showed that students continued to choose high-risk specialties (40%) even though they perceived problems in the current climate of litigation. Among the reasons for their choices were enjoyment and being able to practice in a procedure-oriented specialty that is effective in its mode of treatment. Those who chose low-risk specialties (60%) rated as important the variety of diseases seen and the opportunity to know patients well. Issues related to the malpractice climate were important only to those who switched from a high- to a low-risk specialty. These findings have implications for professional staffing needs.*

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Many factors have been identified as influencing medical students' specialty choices. These include race,<sup>1</sup> sex,<sup>2-8</sup> intellectual ability,<sup>9</sup> aptitude for science,<sup>10</sup> academic performance,<sup>11,12</sup> clinical clerkship experience,<sup>13</sup> attitudes,<sup>14</sup> personality characteristics,<sup>9,15-17</sup> and life-style preferences.<sup>18</sup> We could not find any research that establishes whether recent changes in medical practice, including the current climate of malpractice litigation, influence a student's decision about a specialty.

Key issues in specialty choice include the shift that occurs during medical school and factors influencing it. The stability rate of specialty selection in previous research ranges from 25% to 57%.<sup>19-21</sup> A study by Katz and co-workers found that of the 50% of students who changed their specialty preference during medical school, 84% did so because of negative factors related to the initial choice while only 16% did so because of positive factors found in a new choice.<sup>22</sup>

Our study was designed to examine students' and residents' attitudes toward changes in medical practice, focusing especially on the malpractice litigation atmosphere, and the influence of these changes on specialty choice. The design included the use of longitudinal data, by which we could observe changes in specialty preference relative to shifts in attitudes.

We classified specialties into those at high risk or low risk for malpractice suits. We then identified the factors involved in the decision to practice in a high-risk specialty rather than one in which the probability for suit, and consequently the cost of malpractice insurance premiums, is lower. It is our hypothesis that perceived problems in the current climate of medical practice, especially those involving malpractice issues, cause students to switch from high- to low-risk specialties.

### Methods

This is the follow-up of a study conducted in the fall of 1985. In that study (time 1) a questionnaire regarding awareness of the current malpractice litigation climate and specialty choice was mailed to a random sample of 260 students, stratified by sex with equal numbers of men and women, representing all four years at a medical college in a major city. A 72% response rate (n = 187) was obtained.

Time 1 respondents reported that they would most likely go into internal medicine (26.8%), family practice (13.4%), and pediatrics (13.4%). The specialties perceived as being at high risk for malpractice suit, and the percentage of respondents preferring them, were surgery and its subspecialties (17%), obstetrics and gynecology (5%), and anesthesiology (2%).

The time 2 study, carried out three years later, consisted of a questionnaire sent to the time 1 respondents. The sample size was decreased to 155 from 187 because of dropouts, transfers, and an inability to locate respondents.

Questions probed awareness of the malpractice litigation climate and attitudes toward other changes in the practice of medicine. In addition, 26 items elicited the relative importance of various factors in selecting a medical specialty. This list was derived in part from Tardiff and associates<sup>18</sup> and was presented on a five-point scale (1 = not important, 5 = very important). The recent role of the acquired immunodeficiency syndrome as a factor in career or specialty choice or both, as suggested by Cotton, was not included.<sup>23</sup>

The designation of high- or low-risk specialty in this study was based on the rate classification used by the Illinois State Medical Inter-Insurance Exchange, a physician-owned insurer.<sup>24</sup> This classification sets insurance rates in terms of seven risk categories, and we designated as high risk those

specialties in and above category 4. These specialties are anesthesiology, emergency medicine, obstetrics and gynecology, and surgery and its subspecialties. The low-risk groups included all other specialties.

The data were coded and analyzed using the Statistical Package for the Social Sciences x.<sup>25</sup> Answer categories—that is, agree and strongly agree, important and very important—were collapsed to facilitate analyses. Where appropriate, *t* tests,  $\chi^2$ , and one-way analyses of variance were done.

TABLE 1.—*Characteristics of the Time 2 Sample\**

| Characteristics             | Sample,<br>(n=102), % |
|-----------------------------|-----------------------|
| Race                        |                       |
| White .....                 | 68.6                  |
| Black .....                 | 14.7                  |
| Hispanic .....              | 10.8                  |
| Asian .....                 | 4.9                   |
| Marital status†             |                       |
| Single .....                | 52.9                  |
| Married .....               | 43.1                  |
| Divorced .....              | 2.0                   |
| Most popular specialties    |                       |
| Internal medicine .....     | 23.5                  |
| Obstetrics-gynecology ..... | 16.7                  |
| Family practice .....       | 14.7                  |
| Psychiatry .....            | 5.9                   |
| Radiology .....             | 5.9                   |

\*Mean age, 27 years; male to female ratio, 53:49.  
†The percentages for "Marital status" total 98% because 2% of physicians did not respond to this section of the questionnaire.

## Results

The final response rate was 66% (n = 102). The demographic characteristics of the time 2 sample are described in Table 1. There were no differences between time 2 respondents and nonrespondents on any of the time 1 variables. The most popular specialty choices among time 2 respondents were internal medicine (23.5%), obstetrics and gynecology (16.7%), and family practice (14.7%). A low-risk specialty was chosen by 60% (n = 61), while 40% (n = 41) chose one at high risk for suit. These two groups did not differ significantly in age, sex, race, or marital status.

### Reasons for Specialty Choice

The primary reasons for choosing a specialty are listed in Table 2. Malpractice concerns—rate of suits and costs of insurance premiums—were among the least important factors.

Those who chose high-risk and low-risk specialties differed significantly in their reasons for specialty choice. The high-risk group was more likely to rate as important the opportunity to do operations and other procedures, effectiveness of treatments in the specialty, their own technical competence, and scientific knowledge associated with the specialty.

The low-risk group, on the other hand, was considerably more likely to be influenced by the opportunity to see a wide variety of diseases, to know patients well, and to handle many difficult diagnostic problems in the specialty.

### Stability of Specialty Choice—Comparison of Changes Within and Across Risk Groups

Of the 100 students who had indicated a specialty at both time points, 53% (n = 53) changed specialties during their

TABLE 2.—*Factors in Choosing a High- or Low-Risk Specialty*

| Factor  | Percent Indicating Factor Is Important |                        |                       | P*    |
|---|--|------------------------|-----------------------|-------|
|   | Overall<br>(n=102), %                  | High Risk<br>(n=40), % | Low Risk<br>(n=62), % |       |
| Aptitude for material in specialty .....                    | 70.6                                   | 67.5                   | 72.6                  |       |
| Opportunity to see a wide variety of diseases .....         | 68.6                                   | 47.5                   | 82.3                  | <.001 |
| Organ system or type of disease seen .....                  | 66.3                                   | 72.5                   | 62.3                  |       |
| Opportunity to know patients well .....                     | 65.3                                   | 47.5                   | 77.0                  | <.01  |
| Patients appreciate physician's efforts .....               | 64.4                                   | 75.0                   | 57.4                  |       |
| Ability or technical competence .....                       | 59.4                                   | 87.2                   | 41.9                  | <.001 |
| Effectiveness of treatments .....                           | 59.0                                   | 87.2                   | 41.0                  | <.001 |
| Opportunity to perform operations or procedures .....       | 55.9                                   | 95.0                   | 30.6                  | <.001 |
| Scientific knowledge or precision .....                     | 54.9                                   | 70.0                   | 45.2                  | <.05  |
| Presence of many difficult diagnostic problems .....        | 51.0                                   | 30.0                   | 64.5                  | <.01  |
| Opportunity to add new knowledge to specialty .....         | 49.0                                   | 57.5                   | 43.5                  | <.05  |
| Faculty or house staff as role models .....                 | 48.5                                   | 38.5                   | 54.8                  |       |
| Site of residency training .....                            | 42.6                                   | 41.0                   | 43.5                  |       |
| Opportunity to live in urban, rural, or suburban area ..... | 42.6                                   | 41.0                   | 43.5                  |       |
| Greater flexibility in time management .....                | 41.2                                   | 30.0                   | 48.4                  | <.01  |
| Prediction of manpower needs .....                          | 31.4                                   | 22.5                   | 37.1                  | <.01  |
| Quality of medical school teaching .....                    | 26.5                                   | 30.0                   | 24.2                  |       |
| Length of postgraduate training .....                       | 26.5                                   | 12.5                   | 35.5                  | <.01  |
| High prestige within the profession .....                   | 24.8                                   | 25.0                   | 24.6                  |       |
| Financial rewards of practice .....                         | 23.5                                   | 35.0                   | 16.1                  | <.05  |
| Experience of self or family member as patient .....        | 19.0                                   | 15.0                   | 21.7                  |       |
| Low rate of malpractice lawsuits .....                      | 14.7                                   | 7.5                    | 19.4                  | <.001 |
| Low malpractice insurance premiums .....                    | 12.9                                   | 7.7                    | 16.1                  | <.001 |
| Influence of family or close friends .....                  | 10.9                                   | 7.5                    | 13.1                  | <.05  |
| Interactions with students in medical school .....          | 9.1                                    | .....                  | 14.8                  | <.001 |
| Debts from college or medical school, or both .....         | 3.9                                    | .....                  | 6.5                   |       |

\* $\chi^2$  values based on comparisons between high-risk and low-risk groups.

TABLE 3.—*Reactions to Changes in the Climate of Medical Practice*

| Reaction or Change   | Total Agreeing<br>or Strongly<br>Agreeing, % | Specialty Choice |                | P*    |
|--|--|------------------|----------------|-------|
|  |  | High<br>Risk, %  | Low<br>Risk, % |       |
| Defensive medicine raises the cost of medical care . . . . .   | 76.2   | 70.0             | 80.3           |       |
| Doctors are ordering tests and procedures even when they are not medically indicated as a<br>defense against malpractice suits . . . . . | 73.3   | 75.0             | 72.1           |       |
| It is becoming more difficult for doctors to uphold the ideals of medicine . . . . .   | 70.3   | 77.5             | 65.6           |       |
| Malpractice litigation is having a negative effect on quality of care . . . . .  | 68.3   | 77.5             | 62.3           |       |
| The current malpractice climate has caused a deterioration in the quality of the<br>doctor-patient relationship . . . . .                | 68.3   | 77.5             | 62.3           |       |
| Doctors are stopping certain high-risk procedures that are medically indicated because of<br>fear of being sued . . . . .                | 48.5   | 62.5             | 39.3           | < .05 |
| The probability of being sued sometimes enters into my thoughts of specialty choice . . . . .  | 43.0   | 61.5             | 31.1           | < .01 |
| Defensive medicine raises the quality of care . . . . .  | 17.8   | 22.5             | 14.8           |       |
| Doctors are spending more time than they used to with their patients . . . . .   | 16.8   | 15.0             | 18.0           |       |
| I am planning to practice in an area where rates and fees are lower . . . . .  | 15.3   | 21.6             | 11.5           |       |
| Doctors are decreasing their patient loads . . . . .   | 11.9   | 10.0             | 13.1           |       |
| The number of malpractice suits is an accurate reflection of the incidence of actual malpractice . . . . .                               | 7.9  | 7.5              | 8.2            |       |

\* $\chi^2$  values based on comparisons between high-risk and low-risk groups.

medical school years. Of those who had originally chosen a low-risk specialty ( $n = 73$ ), 32% ( $n = 23$ ) preferred a different one within the low-risk category at time 2, and 23% ( $n = 17$ ) switched to a high-risk specialty. Those who started out in the low-risk group and remained in it (56% of the total sample) were significantly more likely than those who switched to a high-risk specialty to do so because of the wide variety of diseases seen, many difficult diagnostic problems, and flexible working hours. They were also significantly more likely to report that low rates of malpractice suits and insurance premiums were factors in their choice. Those who switched from low- to high-risk specialties (17% of the total sample) were significantly more likely to rate having done so because of their own ability or competence, the opportunity to do specific procedures and to add new knowledge to the specialty, the effectiveness of treatments, and the feeling that patients appreciate the physician's efforts.

Of those starting out in the high-risk group ( $n = 27$ ), 30% ( $n = 8$ ) switched within risk group and 18.5% ( $n = 5$ ) changed to a low-risk specialty. For those who started out and continued in high-risk specialties (22% of the total sample), the opportunity to do specific procedures was a significant factor in their decision.

Those who switched from high- to low-risk specialties (5% of the total sample) reported as important the lower rates of suits and premiums, the length of postgraduate training, the opportunity to know patients well, and interactions with students in medical school.

#### *Reactions to Changes in the Climate of Medical Practice*

Table 3 presents respondents' views of the changing medical environment. When asked to rate, on a five-point scale (5 = positive), the influence of three major forces on quality of care, prepaid group practices received a mean rate of 2.4, diagnosis-related groups a mean rate of 2.1, and the current malpractice climate was rated a mean of 1.97. Further analyses showed that 68.3% agree that the increasing rate of malpractice litigation has an adverse effect on quality of care and contributes to a deterioration in the quality of physician-patient relations. Furthermore, 58.4% of the respondents disagree that physicians should take any patient who presents for treatment, and greater than 70% think it is becoming more difficult for physicians to uphold the ideals of medicine.

#### *High-Risk and Low-Risk Differences*

When these attitudes and perceptions were analyzed separately, high- and low-risk groups differed significantly on only 2 of the 23 items, 12 of which are listed in Table 3. The high-risk group was significantly more likely to agree that they had thought about the probability of a malpractice suit when choosing a specialty and that physicians are stopping certain medically indicated, high-risk procedures because of the fear of being sued.

#### *Changes Over Time*

Respondents were significantly more likely at time 2 than at time 1 to agree that it is becoming more difficult to uphold the ideals of medicine ( $t = 5.41$ ,  $P < .001$ ) and that the current malpractice litigation climate has caused a deterioration in the quality of the physician-patient relationship ( $t = 2.06$ ,  $P < .05$ ). These findings remained when attitudes were analyzed separately for high-risk and low-risk specialty respondents. In addition, those who chose a low-risk specialty were more likely at time 1 than at time 2 to have considered both the probability of being sued and the cost of malpractice insurance in choosing their specialty.

#### *Discussion*

This study begins to examine whether medical students' and residents' perceptions of the changing medical environment influence specialty choice. Study results failed to support our hypothesis that an increased awareness of the malpractice climate would motivate students to avoid high-risk specialties. Consistent with previous research, 52% of respondents changed their specialty choice between times 1 and 2, a period when they were exposed to the actual climate of practice, including the litigation environment. Whereas only 5% switched out of the high-risk category, 17% changed in the opposite direction.

Although respondents perceived problems in the current climate of medical practice and litigation, this did not discourage them from entering high-risk specialties. In fact, the number of those choosing high-risk specialties increased from 27% ( $n = 27$ ) at time 1 to 40% ( $n = 41$ ) at time 2. This represents a slightly higher figure than the 32% of all medical school graduates surveyed nationally in 1987 who had

chosen a high-risk specialty.<sup>26</sup> The shift toward high-risk specialties, however, is similar to that found by Babbott and colleagues, who observed changes in students' preferences between the time they took the medical college admissions test and graduated from medical school.<sup>21</sup>

Of the total group at time 2, those who chose high-risk specialties reported doing so because they enjoy and feel adept at practicing a procedure-oriented specialty that is effective in its mode of treatment. This is in sharp contrast to the opinion held by McCarty that students choose high-technology specialties because of high pay and prestige and low emotional involvement.<sup>27</sup> The low-risk group, on the other hand, chose their specialty for the variety of diseases seen and the opportunity to know patients well. In neither group were malpractice litigation issues significant. We did find, though, that those who switched from a high- to a low-risk specialty rated the malpractice climate as important in their decision. This may be related to a recent finding of the American Association of Medical Colleges that 72% of senior medical students surveyed reported malpractice premium costs as a deterrent to choosing obstetrics and gynecology as their specialty.<sup>28</sup> Thus, the adverse influence of litigation, although not important to those who chose high-risk specialties, is significant for those who switch from a high- to a low-risk specialty.

Our respondents perceive the litigation environment as having a detrimental effect on cost and quality of care as well as the nature of the physician-patient relationship. Most disturbing is the finding that most respondents, many about to enter practice, think it is becoming more difficult to uphold the traditional ideals of medicine. Practitioners, too, are struggling with the disparities between the ideal and the real, as reflected on by Relman and others.<sup>29-31</sup> During the three-year period between studies, these concerns increased substantially. This may be explained in part by the fact that students are forced to practice defensively, which contradicts the ideals taught in medical school and residency.

Respondents who choose high-risk specialties appear acutely aware of the influence of the litigation environment on their specialty, yet may be unaware of or deny the effects that a lawsuit might have on them personally. Charles and co-workers found that 22% of physicians interviewed reported that their malpractice litigation experience was the most stressful event of their entire life.<sup>32</sup> If students were more cognizant of the personal and professional repercussions of being sued, they might not enter a field that is associated with a higher rate of litigation. On the other hand, although students may be fully aware of the serious effects a lawsuit may have on their lives, they may use the psychological defense mechanism of denial, which shields them from consciously considering this important issue. Another explanation for choosing a high-risk specialty may be the simple fact that the positive aspects attracting students to these specialties far outweigh any negative factors.

Our study yielded a larger percentage of students entering high-risk specialties than occurs nationally. This may be due to the greater percentage of women who chose obstetrics and gynecology in our sample. The initial study design called for an equal distribution of men and women. Nationally, however, women make up only about a third of the resident work force. Furthermore, women constitute about 45% of the obstetrics and gynecology residents nationally compared with

65% in our study. Thus, our study is overrepresentative of women who have chosen this high-risk specialty.

That the current climate of medical malpractice litigation has influenced these medical students' and residents' attitudes toward their profession is clear. The effect on specialty choice, however, is important only in regards to those who changed from high- to low-risk specialties during the period of the study. The current trend is that students are moving away from low-risk specialties, especially those associated with primary care.<sup>27,33</sup> This study suggests that concerns about malpractice litigation, though not a powerful factor in specialty choice, may influence some students to counter the trend and choose a specialty at low risk for malpractice litigation.

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